



USED VEHICLES AND THE ENVIRONMENT

A Global Overview of Used Light Duty Vehicles:
Flow, Scale and Regulation

Update and Progress 2021

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Vehicles:**

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Introduction

Introduction

The export of used light duty vehicles (LDVs) has increased significantly. In 2015, 3.4 million used LDVs were exported globally, by 2019 this had increased to 4.8 million. Most likely due to the covid-19 pandemic, there was a reduction of used LDVs in 2020 to 4 million.

This report gives updated and new information to the 2020 UNEP report, *“Global Overview on Used Light Duty Vehicles: Flows, Scale, and Regulations”*. The paper includes:

- An additional major exporter of used LDVs, the Republic of Korea (ROK). This is in addition to the three previously reviewed exporters - the United States of America (USA), European Union (EU) and Japan.
- Two more years of data from all the four major exporters has been included in the analysis. The report thus includes new used LDVs data covering the period from 2015 to 2020 across 208 importing countries from seven regions globally.
- An update of the regulatory environment for 146 developing and transitional countries in 2021, using the UNEP ranking.
- Progress made in Africa to advance used LDVs regulations.



Key Findings

Key Findings

- The four main exporters of used LDVs are the EU, Japan, USA, and ROK.
- Between 2015 and 2020, about 23 million used LDVs were exported to 208 countries and territories worldwide across seven regions, from these four main exporters.
- During this period, around 66% of the used LDVs were exported to developing and transitional countries.
- From these exports of used LDVs to developing and transitional countries, Africa received the highest share of exports (24%), followed by Eastern Europe, Caucasus, and Central Asia (14%), Asia -Pacific (12%), the Middle East (10%), and Latin America and the Caribbean (8%).
- From 2015 to 2020 the EU traded around 11.5 million used LDVs, 58% of which remained within the EU and 42% being exported outside the EU. Used LDVs trade within EU countries, plus imports from the USA, Japan and ROK to the EU was 31% of the total units traded globally.
- For the period 2015-2020, the EU remained the largest exporter of used LDVs, considering trade within and outside the EU at (49%) followed by Japan (26%), the USA (18%), and ROK (8%).
- Between 2017 and 2020, the EU, Japan, and ROK exported a total of 760,139 hybrid, plug-in hybrid and battery-powered electric used vehicles globally. Data for the EU and ROK was for LDVs, while for Japan this included LDVs and buses, data was unavailable for the USA.
- Of the 146 developing and transitional countries studied to determine their used LDVs import policies, there has been progress since 2020 on regulations for ensuring better quality used vehicles. From 47 countries with 'good' or 'very good' policies, this has now increased to 62 countries.
- Since the previous report, 15 countries of the Economic Community of West African States (ECOWAS) sub-region have adopted a Vehicles Directive for Euro 4/IV equivalent emission standards, with implementation from January 2021. Peru adopted Euro 6/VI emission standards in October 2021 with an implementation date of October 2024 concurrently with 10 ppm fuels. Cambodia adopted Euro 4/IV emission standards this year, to be implemented by end of 2021. At the same time Ethiopia introduced in 2019 higher taxation for used LDVs (up to 500%) to discourage import of older used LDVs.
- In 2020, UNEP, together with partners, launched the "Safer and Cleaner Used Vehicles for Africa project". This project aims at promoting a global consensus on minimum requirements before used vehicles are exported and imported. This will ensure major road safety benefits for both car drivers and road users, with co-benefits to the environment and economy.

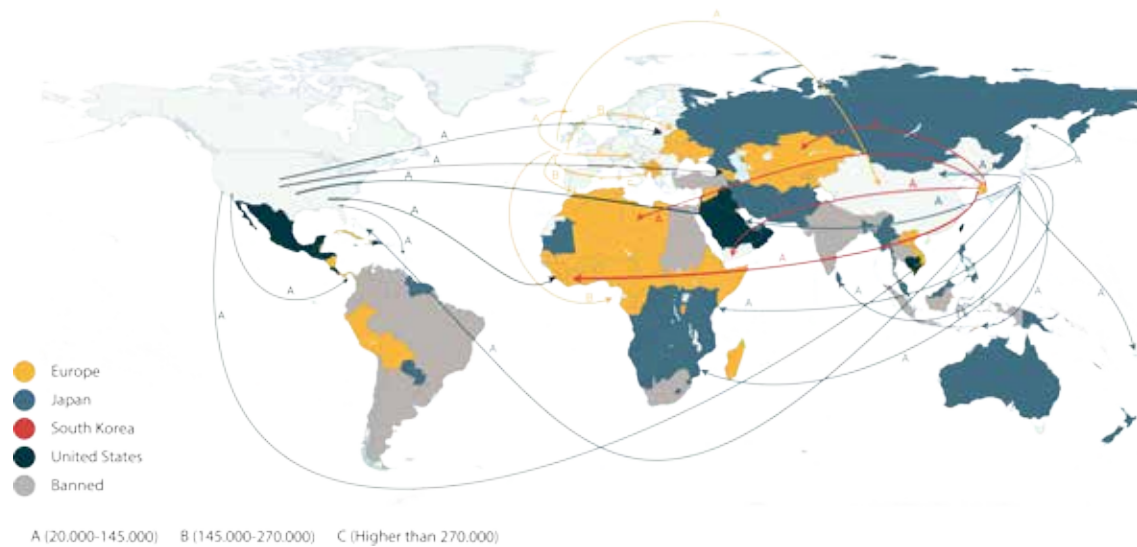


**Flows and Scale
of Used Light Duty
Vehicles from the
Major Exporters - EU,
USA, Japan, ROK:
2015-2020**

The global supply chains and scale of used LDVs flows are analyzed from the four major global used vehicle exporters (the EU, USA, Japan, and ROK). Export data analyzed is for 208 countries and territories across seven regional markets (Africa; Asia- Pacific; Eastern Europe, the Caucasus and Central Asia (EECCA); the European Union (EU); Latin America and the Caribbean (LAC); Middle East; and North America).

In 2020, the quantity and flow of used LDVs from these four major exporters is depicted in map 1. It is important to note however that the recipient countries may not be the final destinations, as some countries, including those that ban imports of used vehicles for national use, re-export them in their regions.

MAP 1 Used Light Duty Vehicles Quantity and Flow to Main Destination Markets from the EU, USA, Japan, ROK (2020)



Source: UNEP, based on data from four exporting countries to 208 countries globally from 2020

From 2015 to 2020, around 23 million used light duty vehicles (LDVs) were exported to 208 countries and territories worldwide across seven regions, from these four main exporters.

The share of used light duty vehicle exports from the four exporters from 2015-2020 is analyzed below and shown in figure 1.

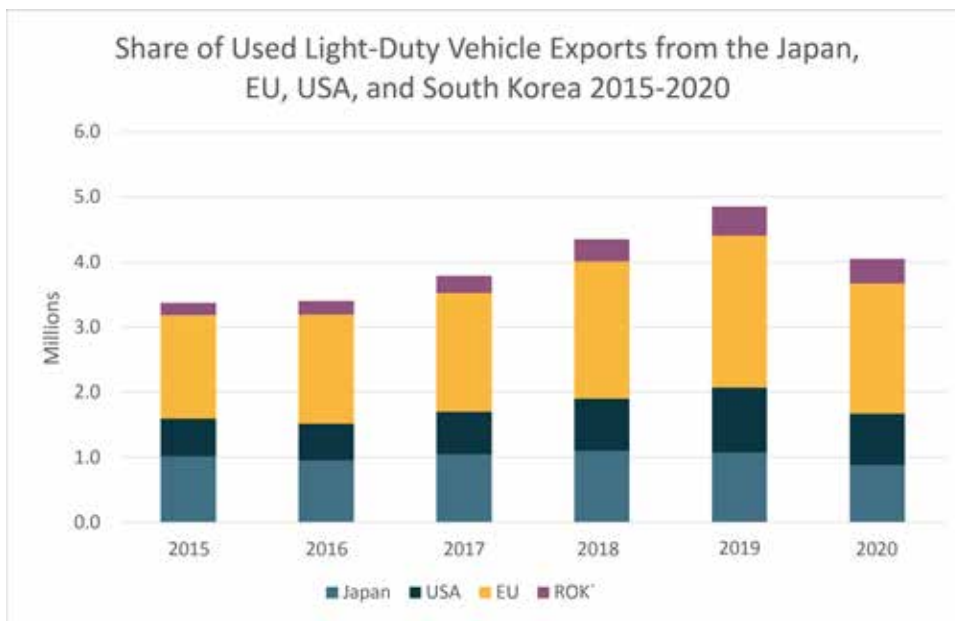
From 2015, these exports have been increasing steadily until 2020 when there was a decline, most likely due to the covid-19 pandemic. In 2015, around 3.4 million used vehicles were exported, and by 2019 these reached around 4.8 million annually. The LDV market grew on average 9.7% between 2015 and 2019. In 2020, the number of used LDVs exported reduced by 800 thousand from the previous year to 4 million units.

The EU as a region traded the most LDVs, 11,535,841 units (49% of global used LDVs in the period 2015-2020). This figure includes those traded between the EU countries, as well as those exported outside the EU. Of the total amount traded, 4.9 million units (42%) were exported out of the EU to other continents, with around 6.6 million units (58%) remaining within the EU countries. Japan

exported 6.1 million used LDVs (26%), the USA exported around 4.4 million units (18%) and ROK around 1.8 million units (8%).

On the importing side, from all four exporters combined: the EU registered approximately 7.4 million used light duty vehicles (31%), Africa received approximately 5.6 million units (24%), Eastern Europe, Caucasus, and Central Asia received approximately 3.2 million units (14%), Asia -Pacific around 2.9 million units (12%), the Middle East around 2.4 million (10%), Latin America and the Caribbean (LAC) around 2 million (8%), and North America around 178,531 (1%).

FIGURE 1. Share of Used Light-Duty Vehicle Exports from the EU, USA, Japan, and ROK 2015-2020



Source: UNEP, based on data from four exporting countries to 208 countries globally from 2015-2020

TABLE 1. Summary of the exports and imports studied across 208 countries from 2015-2020

Exporters	2015-2020	
	Approximate number of vehicles	% share by region
*EU	11.5 million (4.9 million of these were exported out of the EU to other regions)	49 %
Japan	6.1 million	26%
USA	4.4 million	18%
ROK	1.8 million	8%
Importing	Approximate number of vehicles	Share of vehicles imported
*EU	Between EU countries: 6.6 million	Between EU countries: 28%
	Between EU countries: 6.6 million	From Japan: 1%
	From Japan: 0.21 million	From USA: 2%
	From USA: 0.52 million	From ROK: 0.01%
	From ROK: 0.034 million	
	Total: 7.4 million	Total: 31%

		2015-2020
Africa	5.6 million	24 %
EECCA	3.2 million	14 %
Asia-Pacific	2.9 million	12 %
Middle East	2.4 million	10 %
LAC	2 million	8 %
*North America	0.17 million	1%

Source: UNEP, based on data from four exporting countries to 208 countries globally from 2015-2020

*EU includes all member states.

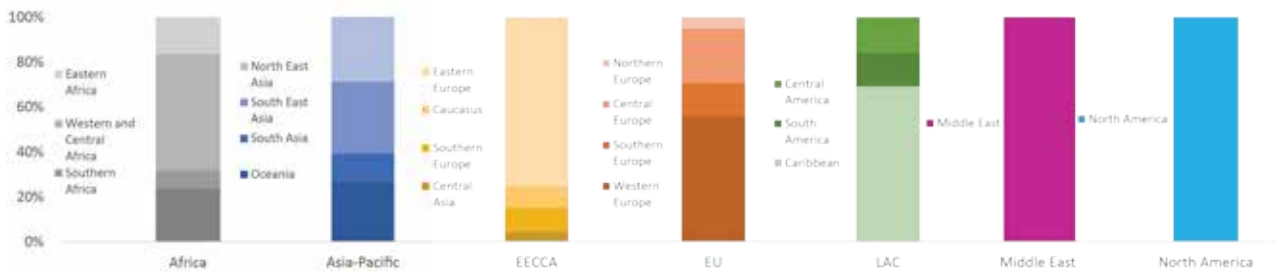
* North America includes USA, Canada, and Greenland

The number of used light duty used vehicle exports from EU, Japan, USA, and ROK dropped from around 4.8 million units in 2019, to 4 million units in 2020. This reduction could have been caused by covid-19 impacts.

In 2020, the quantities of LDVs imported by each region and distributed by sub-region is analyzed below and shown in figure 2.

- Africa: 900,191 used light duty vehicles were imported. The distribution by sub-region is as follows:
 - Western and Central Africa - 52% (464,518 units)
 - North Africa - 24% (214,153 units)
 - Eastern Africa - 17% (148,581 units)
 - Southern Africa - 8% (72,939 units)
- Asia – Pacific: 362,927 used light duty vehicles were imported as follow:
 - South Asia - 31% (114,153 units)
 - Northeast Asia - 29% (105,083 units)
 - Oceania - 27% (96,813 units)
 - South East Asia - 13% (46,878 units)
- Eastern Europe, Caucasus and Central Asia: 745,972 used light duty vehicle were imported as follows:
 - Eastern Europe - 76% (563,932 units)
 - Southern Europe - 11% (79,756 units)
 - Caucasus - 9% (70,380 units)
 - Central Asia - 4% (31,904 units)
- EU: 1,302,924 was the total number of used light duty vehicles traded between EU countries and imported from the three other exporters as follows:
 - Western Europe - 56% (726,407 units)
 - Central Europe - 24% (316,911 units)
 - Southern Europe - 15% (191,979 units)
 - Northern Europe - 5% (67,627 units)
- Latin America and the Caribbean: 285,512 used light duty vehicles were imported as follows:
 - Each of the three subregions (Central America, South America, and the Caribbean) received on average 97,150 units (33%) of the used vehicle imports.

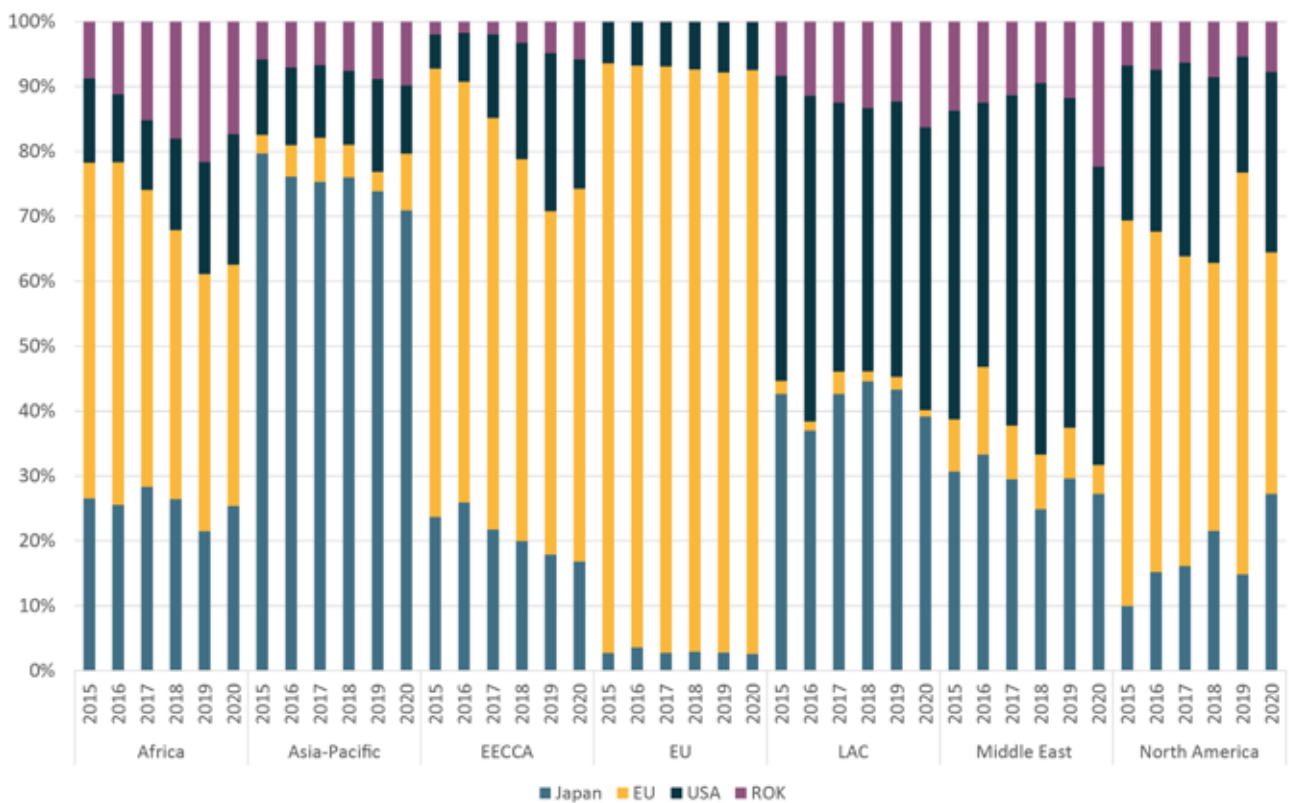
FIGURE 2. Distribution of Used Light-Duty Vehicle imports by regions and sub-regions from the EU, USA, Japan, and ROK in 2020



Source: UNEP, based on data from four exporting countries to 208 countries globally from 2020

The destination and amounts of used light duty vehicles exported from EU, USA, Japan, and ROK in 2020 is further analyzed below and shown in figure 3.

FIGURE 3. Share of Used Light-Duty Vehicle Exports from the EU, USA, Japan, and ROK to Africa, Asia-Pacific, EECCA, EU, LAC, Middle East, and North America in 2020



Source: UNEP, based on data from four exporting countries to 208 countries globally from 2020

An analysis of regional distribution of used LDVs imports in 2020 from the four exporters show that:

- Africa received 335,571 vehicles from the EU and 229,444 from Japan. Africa historically imports used vehicles mainly from these two exporters. Imports from the USA and ROK are however increasing and jointly totaled 335,176 in 2020, compared to 185,753 in 2015.
- Asia – Pacific imports used vehicles primarily from Japan and the USA, and these trends have been constant in the last six years. In 2020, the region imported 71.4% (259,248 units) of used LDVs from Japan, 10.6% (38,409 units) from the USA, 9.2% (33,342) from ROK, and 8.8% (31,928) from the EU.
- EECCA imported most used vehicles from the EU at 58% (429,719 units), followed by the USA 20% (149,359 units), Japan 17% (125,949 units) and ROK 6% (40,945 units).
- LAC historically import mainly from Japan and the USA. In 2020, the region imported 44% (125,210 units) of their used light duty vehicles from the USA, 39% (112,458 units) from Japan and 16% (45,058 units) from ROK.
- The Middle East imports mainly from the USA and Japan. In 2020, 46% (192,624 units) of used light duty vehicles were imported from the USA, 27% (114,033 units) from Japan, and 22% (90,351 units) from ROK.
- The EU countries that allow used vehicle imports received these mainly from their member states at 89.9% (1,171,832 units), with smaller shares from the USA at 7.4% (96,355 units), Japan at 2.6% (33,842 units) and ROK at 0.1% (895 units).
- North America (Canada, USA, and Greenland) imported 37% (9,122 units) of used light duty vehicles from the EU, 27% (6,667 units) from Japan and 5% (1,899 units) from ROK. At same time, Canada and Greenland imported 28% (6,805 units) of their used vehicles from the USA.

In each region, the top five importing countries in 2019 were identified. The total number of vehicles imported by these top importers were compared between 2019 and 2020 and analyzed below and shown in table 2.

- Africa: In 2019, Libya represents the main importer of used LDVs, followed by Nigeria, Kenya, Benin and Ghana. A reduction from 2019 to 2020 in the used vehicle market is observed, except for Ghana that increased their imports of used LDVs by around 10,000 units.
- Asia – Pacific: In 2019, New Zealand, Mongolia, Cambodia, Myanmar, and Sri Lanka were the main importers. In 2020, imports by Cambodia Myanmar and Sri Lanka reduced by over 40%.
- EECCA, Georgia imported the most used light duty vehicles in 2019, however, these dropped by 65% in 2020. Ukraine is the second largest importer, and from 2019 to 2020 the country increased imports by 46%.
- LAC: Chile was the largest importer of LDVs in 2019 with 91,828 units. Even though the country has banned used vehicles, Chile re-exports these to other landlocked countries in the region, such as Paraguay and Bolivia. LDVs imports fell by about 12% across the top importing countries in 2020, compared to 2019, except for Guatemala that saw a 1% increase.

- Middle East: The United Arab Emirates (UAE) is the main importer in the region with almost 70%. In 2020 imports of LDVs fell by 31% compared to 2019. The UAE plays a key role in re-export of used vehicles in the region and to Africa.
- EU: within the EU countries, the highest used LDVs imports were registered in Germany (31%), France (26%), Poland (16%), Netherlands (15%) and Belgium (12%). In most of the EU countries imports of used vehicles dropped between 2019 and 2020.
- North America: the USA was the main importer of used LDVs in 2019, with a reduction of 47% observed in LDVs imports in 2020.

TABLE 2. Top Five Importing Countries of Used Light Duty Vehicles by region in 2019 and 2020

IMPORTING COUNTRY	2019 USED VEHICLE IMPORTS	2020 USED VEHICLE IMPORTS
AFRICA		
Libyan Arab Jamahiriya	388104	173277
Nigeria	159207	152343
Kenya	71694	54528
Benin	60940	47395
Ghana	53190	62596
ASIA - PACIFIC		
New Zealand	106518	84632
Mongolia	69848	58592
Cambodia	57007	31352
Myanmar	50051	23115
Sri Lanka	26194	9219
EECCA		
Georgia	183159	64884
Ukraine	178173	260575
Russian Federation	118304	121762
Serbia	106961	129093
Bosnia And Herzegovina	51660	46051
LAC		
Chile	91795	80498
Mexico	55410	42246
Dominican Republic	53244	43864
Jamaica	29501	20537
Guatemala	27015	27168
MIDDLE EAST		
United Arab Emirates	315011	217086
Jordan	63326	68363
Oman	45209	54317
Yemen	18261	41625
Lebanon	12767	4715
EU		
Germany	227149	192271

IMPORTING COUNTRY	2019 USED VEHICLE IMPORTS	2020 USED VEHICLE IMPORTS
France	193861	200302
Poland	114033	81634
Netherlands	110005	99698
Belgium	89193	81755
NORTH AMERICA		
United States	29509	15733
Canada	9049	8690
Greenland	48	70

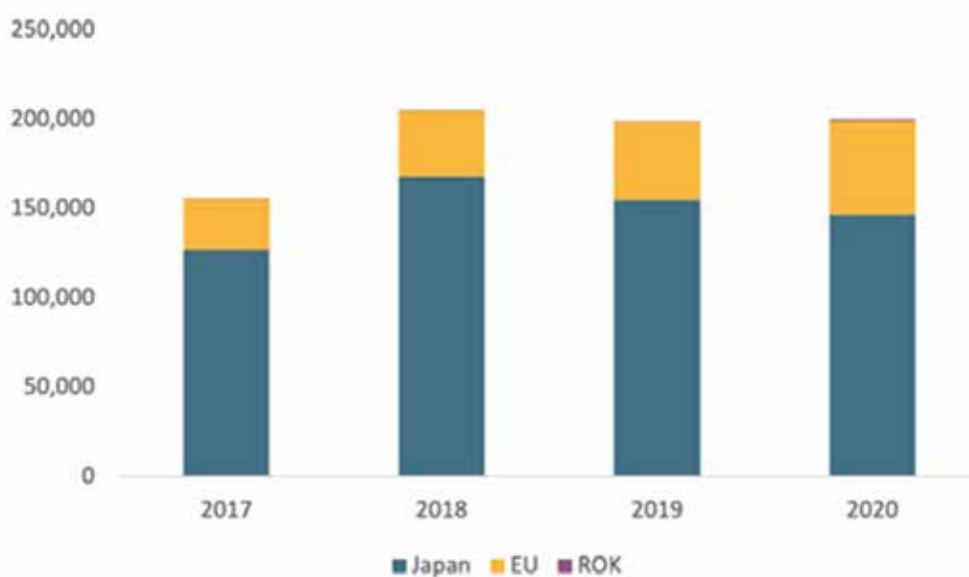
Source: UNEP, based on data from four exporters to 208 countries globally from 2019 and 2020

Hybrid, Plug-in Hybrid and Battery-powered electric used vehicles

Opportunities exist for electric vehicle technology transfer through used vehicles, thus assisting countries to leapfrog to cleaner technologies faster. Sales of used hybrid electric vehicles (HEV), plug-in hybrid electric vehicles (PHEV) and battery-powered electric vehicles (BEV) are increasing globally. **Between 2017 and 2020, the EU, Japan, and ROK exported a total of 760,139 HEV, PHEV, and BEV globally. Data for the EU and ROK was for LDVs, while for Japan this included both LDVs and buses, data was unavailable for the USA.**

The exports of used light duty HEV, PHEV and BEV from the EU, Japan, and ROK between 2017-2020 is analysed below and shown in figure 4.

Fig.4 Used light duty HEV, PHEV and BEV traded by the EU, Japan, and ROK between 2017 and 2020



Source: UNEP based on data from the EU, Japan, and ROK exports to 208 countries globally from 2017 to 2020

* Data for the EU and ROK was for LDVs, while for Japan this included LDVs and buses, data was unavailable for the USA

*The EU exported 161,806 HEV, PHEV and EV and this includes vehicles traded between EU countries, as well as exported to countries outside the EU (132,021 between EU member states)

- The main recipient markets of used HEV, PHEV, and BEV are Asia-Pacific with 52% (393,186 units), the EU with 21.2% (161,309 units), EECCA with 16% (125,411 units), Africa with 5% (36,042 units), Latin America and the Caribbean with 4% (28,187 units), and the Middle East with 2% (14,854 units).
- The EU traded 161,806 used light duty HEV, PHEV and BEV between 2017 and 2020. Of these, 132,021 vehicles were sold between countries in the EU. The balance 29,785 were exported out of the EU, of these, Africa received 8.5% (13,751 units), the EECCA 3.8% (6,180 units), the Middle East 3.2% (5,227 units), Asia-Pacific 1.7% (2,709 units), North America 0.7% (1,077 units) and LAC 0.5% (841 units). In 2017, the EU exported close to 28,000 used light duty HEV, PHEV and BEV and by 2020, this number had increased to 52,000 units, a growth of 82% in four years.
- Japan exported about 596,000 used HEV, PHEV and BEV light duty vehicles and buses between 2017 and 2020. The main destinations of these vehicles were Asia- Pacific 65% (390,188 units), and EECCA 20% (118,974 units).
- ROK exported approximately 1,600 used light duty HEV, PHEV and BEVs between 2017 and 2020. Middle East received 60% (954 units) of these vehicles, while Asia – Pacific and EECCA received 18% (289 units) and 16% (257 units) respectively.

Table 3 shows the number of used HEV, PHEV, and BEV vehicles exported from the EU, Japan, and ROK to the different regions, between 2017 to 2020.

TABLE 3. Imports to the regions from EU, Japan, and ROK of used HEV, PHEV, and BEV from 2017 to 2020.

Region	Total exports	% share by region
EECCA	125,411	16.5%
Africa	36,042	4.7%
LAC	28,187	3.7%
Asia-Pacific	393,186	51.7%
EU	161,309	21.2%
Middle East	14,858	2.0%
North America	1,146	0.2%
Total	760,139	

Source: UNEP based on data from the EU, Japan, and ROK exports to 208 countries globally from 2017 to 2020

Data for the EU and ROK was for LDVs, while for Japan this included LDVs and buses, data was unavailable for the USA

**Regulatory
Environment
for Used Light
Duty Vehicles in
developing and
transition countries
(Aug 2021)**

National regulatory environments that seek to incentivize cleaner and more efficient used LDVs have been analysed for 146 developing and transition countries. These have been categorized in a ranking system by UNEP.

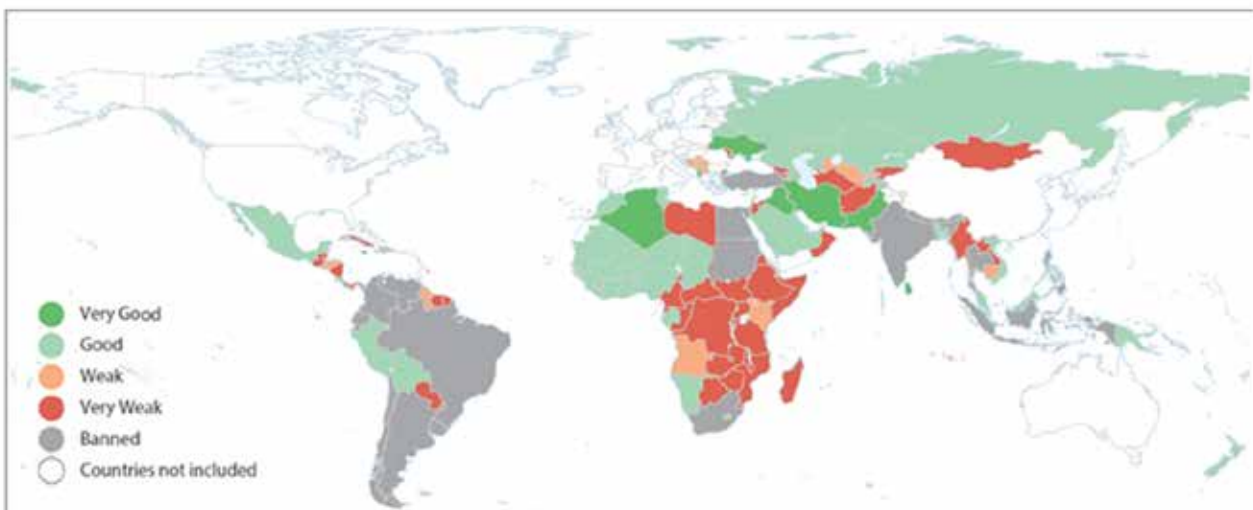
TABLE 4. Regulatory Environment Ranking (UNEP)



Source: Based on data collected from the 146 countries up to August 2021 (UNEP data)

In August 2021, 146 countries were reviewed to assess regulatory measures adopted to manage used light duty vehicle imports. There has been some progress since the first Used Vehicles and Environment report of October 2020. Last year, the 15 countries of the ECOWAS sub-region have adopted a Vehicles Directive for Euro 4/IV equivalent emission standards, with implementation from January 2021. Peru adopted Euro 6/VI vehicle emissions standards in October 2021, the first country in the LAC region to do so nationwide, and implementation is to start from October 2024, concurrently with 10 ppm sulphur fuels. Cambodia adopted Euro 4/IV vehicle emission standards in 2021, to be implemented by end of the year. In 2020, there were 81 countries with weak or very weak measures and 47 countries with good or very good measures. In 2021, 66 countries have weak or very weak measures and 62 countries have good or very good measures. This is shown in Map 2 using the above UNEP ranking system, and in Table 5 by country.

MAP 2 Used Light Duty Vehicle Regulatory Environment (UNEP, August 2021)



Source Based on 146 countries studied up to August 2021 (UNEP data)

Table 5 Used Light Duty Vehicle Regulatory Environment Rankings (August 2021)

Regulatory Environment Ranking (UNEP)	Countries	Region
Very Good	Algeria, Mauritius, Pakistan, Singapore, Sri-Lanka, Albania, Ukraine, Iran, Iraq, Israel, United Arab Emirates	Total:11 Africa (2) Asia-Pacific (3) EECCA (2) LAC (0) ME (4)
Good	Benin, Burkina Faso, Cape Verde, Chad, Côte d'Ivoire, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Lesotho, Liberia, Mali, Mauritania, Morocco, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Togo, Tunisia, Bangladesh, Brunei, Fiji, Malaysia, Maldives, New Zealand, Papua- New Guinea, Timor-Leste, Vietnam, Azerbaijan, Belarus, Kazakhstan, Tajikistan, Russia, Antigua & Barbuda, Barbados, Bahamas, Bermuda, Bolivia, Costa Rica, Dominican Republic, Jamaica, Mexico, Peru, Trinidad & Tobago, Bahrain, Kuwait, Qatar, Saudi Arabia	Total:51 Africa (22) Asia-Pacific (9) EECCA (5) LAC (11) ME (4)
Weak	Angola, Djibouti, Kenya, Namibia, Cambodia, Samoa, Bosnia and Herzegovina, Serbia, Macedonia, Uzbekistan, El Salvador, Guyana, Honduras, Suriname, Lebanon	Total:15 Africa (4) Asia-Pacific (2) EECCA (4) LAC (4) ME (1)
Very Weak	Botswana, Burundi, Cameroon, Central African Republic, Comoros, Congo, Democratic Republic of Congo, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Libya, Madagascar, Malawi, Mozambique, Sao Tome & Principe, Somalia, South Sudan, Tanzania, Uganda, Zambia, Zimbabwe, Afghanistan, Laos, Mongolia, Myanmar, Nauru, Palau, Armenia, Georgia, Kyrgyzstan, Moldova, Montenegro, Turkmenistan, Aruba, Belize, Cuba, Dominica, French Guiana, Grenada, Guatemala, Haiti, Nicaragua, Panama, Paraguay, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Turks and Caicos, Jordan, Oman	Total:51 Africa (22) Asia-Pacific (6) EECCA (6) LAC (15) ME (2)
Banned	Egypt, South Africa, Seychelles, Sudan, Bhutan, India, Indonesia, Nepal, Philippines, Thailand, Turkey, Argentina, Brazil, Chile, Colombia, Ecuador, Uruguay, Venezuela	Total:18 Africa (4) Asia-Pacific (6) EECCA (1) LAC (7)
		Total: 146

* Since the last UNEP report of 2020, 15 countries of the ECOWAS sub-region have adopted a Vehicles Directive for Euro 4/IV equivalent emission standards, implementation from January 2021. Peru adopted Euro 6/VI in October 2021, and implementation is from October 2024 concurrently with 10ppm fuels. Cambodia adopted Euro 4/IV in 2021, to be implemented by end of 2021.



Progress in Africa

UNEP has been collaborating with countries globally to put in place regulations, standards, and processes to ensure that countries only receive quality used vehicles. One of the projects being implemented by UNEP, together with partners, focuses on Africa as the region with the highest road fatalities, and will be expanded to include other regions. The *“Safer and Cleaner Used Vehicles for Africa project”* was launched in 2020. This project will ensure major road safety benefits, for both car drivers, road users, with co-benefits on the environment and economy, and provides a platform for the major LDV exporters and African importing countries and regional bodies to introduce minimum standards for used LDVs import and export.



Under this project, guidelines have been developed to support countries on used vehicles inspection and monitoring framework, compliance and enforcement mechanisms, and information sharing systems. Best practice procedures and requirements for exporting and importing countries have also been reviewed. Main findings include the need for minimum criteria, such as a valid roadworthiness certificate at the point of export, a certificate of conformity, and a framework to support sharing of data on the used vehicles between exporting and importing countries.

Progress in regions includes new adopted regulations in Africa. In September 2020, the 15 member states of the Economic Commission of West African States (ECOWAS) adopted the first regionally harmonised vehicle regulation for both new and used vehicles in Africa. This Directive requires that vehicles that are imported, both new and used, petrol and diesel, will need to comply to a minimum of EURO 4/IV equivalent vehicle emissions standards from January 2021. An age limit of 5 years on light duty vehicles and 10 years on heavy duty vehicles is also required and the countries have a period of 10 years to implement the age restrictions. Additionally, in 2021, East African countries have proposed a harmonized Euro 4/IV equivalent emissions standard for new and used, light and heavy-duty vehicles. From the exporting side, the European Commission is currently revising the Directive on end-of-life vehicles (ELV Directive). This Directive sets targets for ELVs and their components. The Commission expects to present a legislative proposal for the review of the Directive in 2022.

UNEP, and partners, will continue supporting exporting and importing countries to put in place minimum requirements and policies for safer and cleaner used vehicles. This will be complemented by capacity building through trainings on various key topics, amongst them, the establishment of used vehicle information sharing systems with data support, inspection and monitoring frameworks and implementation of compliance systems.

An aerial photograph of a parking lot filled with cars, overlaid with a white grid. A thick yellow horizontal bar is positioned above the word 'Conclusion'. The word 'Conclusion' is written in a large, white, sans-serif font, centered on the page. The grid lines are spaced evenly across the parking spaces, and the cars are mostly dark-colored, with a few red ones visible.

Conclusion

The report analyses the flow, scale, and regulatory environment of used light duty vehicles (LDVs). Comparatively, little is known about the international trade of used heavy-duty trucks and buses, despite this category being responsible for a disproportionate amount of fine particle and black carbon pollution. **UNEP is currently developing the first global overview report of Used Heavy Duty Vehicles flow to be released in 2022.**

Challenges remain in obtaining data from exporting and importing countries. There is a need for a harmonized framework and used vehicles Harmonized System (HS) codes for data sharing and methodology that is also transparent and freely available. The data used was obtained for the EU from EUROSTAT, USA – United States International Trade Commission, Japan - E-Stat website and IATA (only the top 50 importers), ROK - Korea International Trade Association.

Many vehicle importing countries do not disaggregate used vehicles from overall vehicle imports, sales, and registrations in their trade statistics. In addition to making analysis a challenge, this also impedes the development and application of policy and fiscal instruments that could serve to improve the quality of vehicles entering importing markets.

Additionally, export and import data reported at the national level are not harmonized across markets. For example, data from Japan shows that total used vehicle exports in 2015 to Kenya were 65,230 units whereas the data acquired from the Kenyan government for the same period showed that the used vehicles imported from Japan, which account for close to 97.5 per cent of total Kenyan vehicle imports, were 83,711 units (ERC, 2018).

Finally, disparate import procedures encourage grey markets for used vehicles providing opportunities for countries with fewer restrictions to import older vehicles with compromised environmental and safety standards. In addition, this allows for the trade in end-of-life vehicles that should be scrapped in their markets of origin. The grey markets and extent of end of life vehicles trade was not investigated. Similarly, there are indications, that a significant share of used vehicles has been illegally tampered with, for example the removal of critical road safety and environment equipment such as exhaust filters and air bags. The extent to which this is taking place would require further study.



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